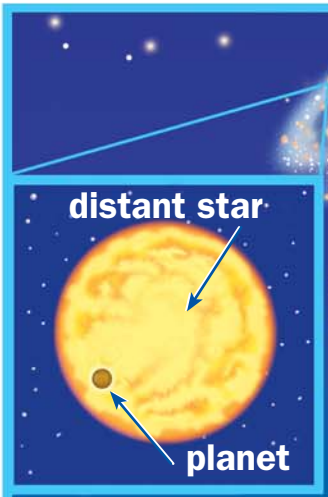
Science Weekly HANDS-ON
"PUT A LITTLE SCIENCE IN YOUR WEEK"
Vol. 29, No. 01
Level B

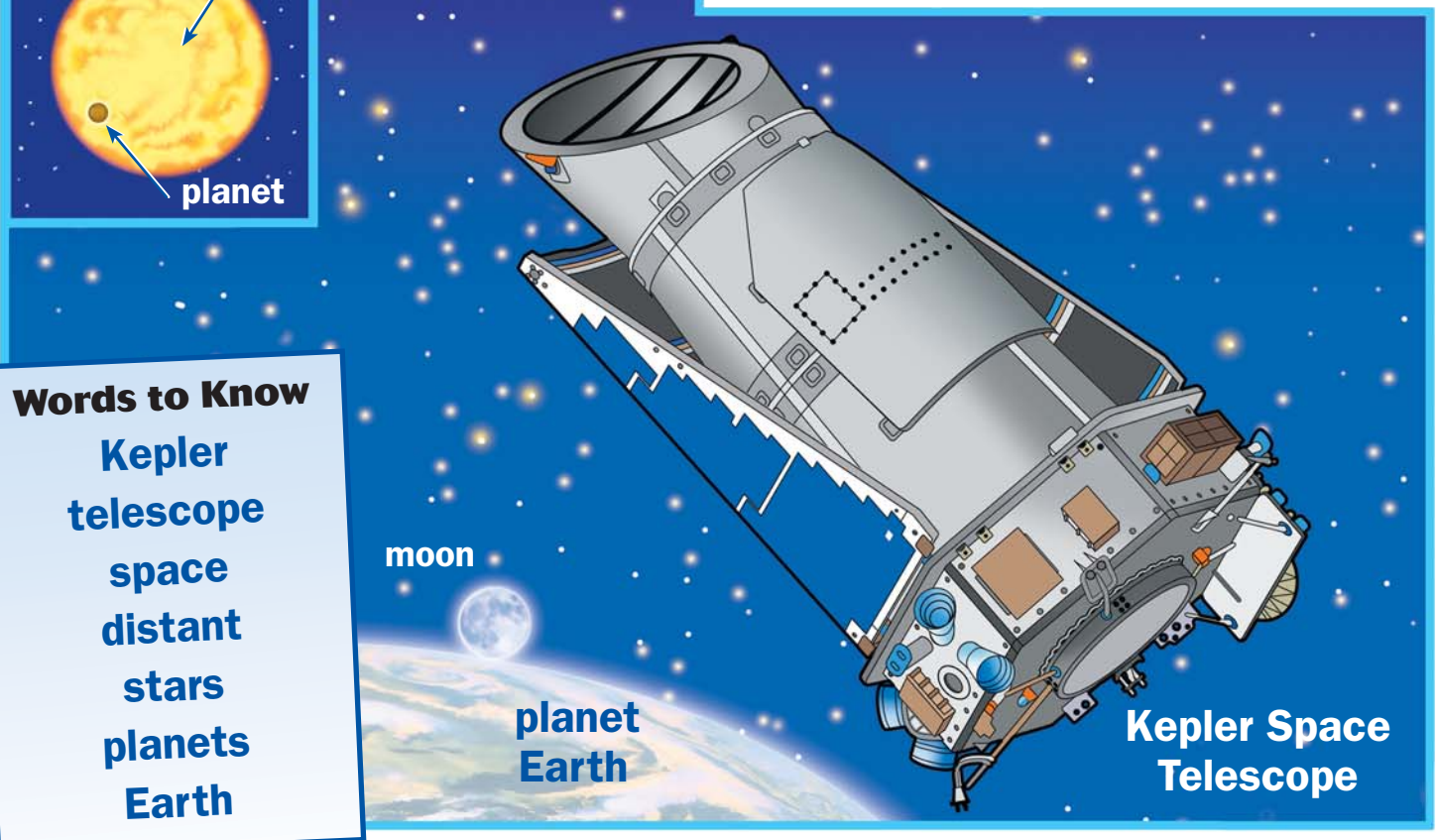
The Kepler Space Telescope

Kepler (Kep-ler) is a **space telescope** (tel-e-scope). It was named after **Johannes Kepler**. Telescopes help us see **distant** (dis-tant) things. Kepler looks at distant **stars**. It looks for **planets** (plan-ets) around those stars. So far, it has found 74 planets.

Science says... Johannes Kepler was a **German scientist** (sci-en-tist) who found out how **planets** move.

Could some of those planets be like **Earth**? Might they have life? These are some questions we hope Kepler can help answer.





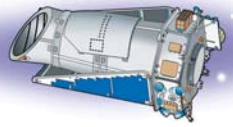
Words to Know

Kepler
telescope
space
distant
stars
planets
Earth

NOTE TO TEACHERS and PARENTS: (See directions in Teaching Notes for all activities.)

Vocabulary

Finish the sentence. Use at least two of the new **bold blue** words from page 1.



The Kepler telescope

ADULT SUPERVISION REQUIRED

ATTENTION TEACHERS: *Please read the Teaching Notes before beginning this activity.*

Weekly Lab

When a planet moves in front of its star, the star's light changes. Kepler looks for this change. Can you?

You need: modeling clay, string, large white ball

Step 1: Make a planet out of the clay.

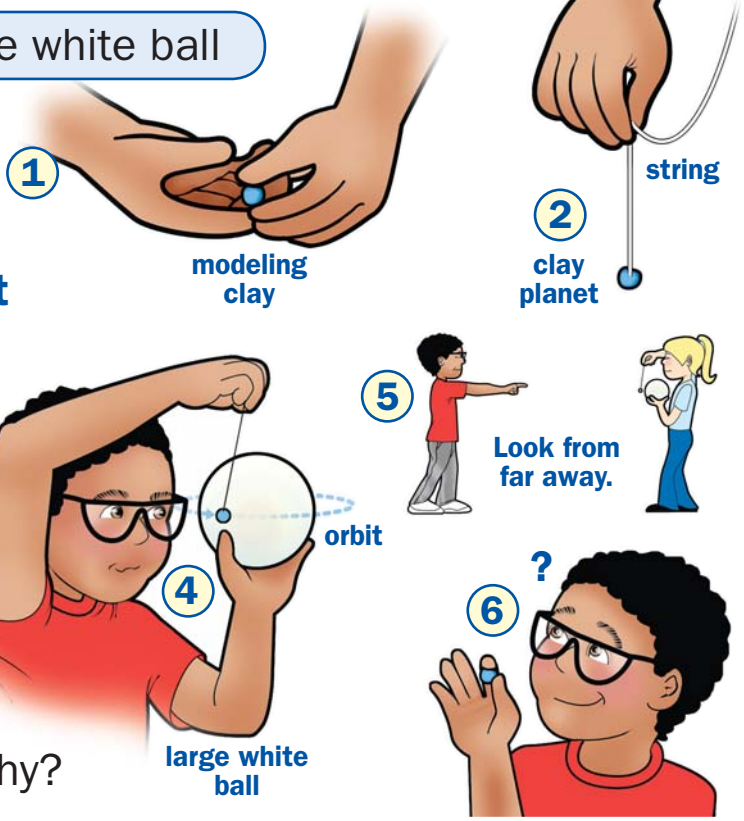
Step 2: Stick the planet on the end of a string.

Step 3: Make the planet circle or **orbit** (or-bit) around the ball (star).

Step 4: Can you see the planet in front of the star?

Step 5: Move as far away from the lab as you can. Is it harder to see the planet?

Step 6: What do you think happens to the star's light when the planet moves in front of it? Why?



A star's light **dims** a small bit when a planet moves in front of it. Kepler sees when this happens. Sometimes a star's light dims over and over at regular times. This means there is a planet moving around the star.

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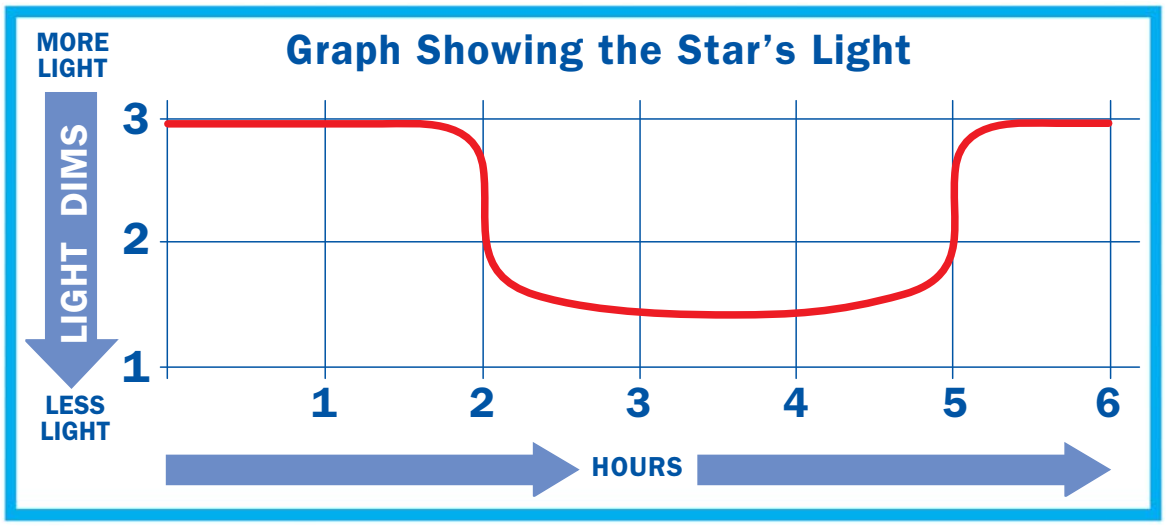
Math

The graph shows the star's light. The red line shows when the light dims. Circle the red line where the light dims.



Hour many hours was the planet in front of the star?

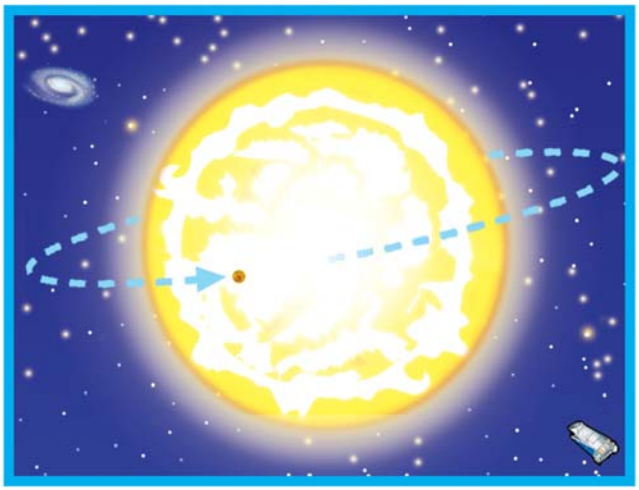
_____ hours

Draw your own graph. Show what happens to the light when a planet orbits the star. How many hours is the planet in front of the star?

Writing in Science

Answer the questions in your science journal.

1. Why are distant planets hard to find?
2. What might it mean if a star's light dims over and over in a repeating pattern?
3. Why do scientists want to look for other planets?



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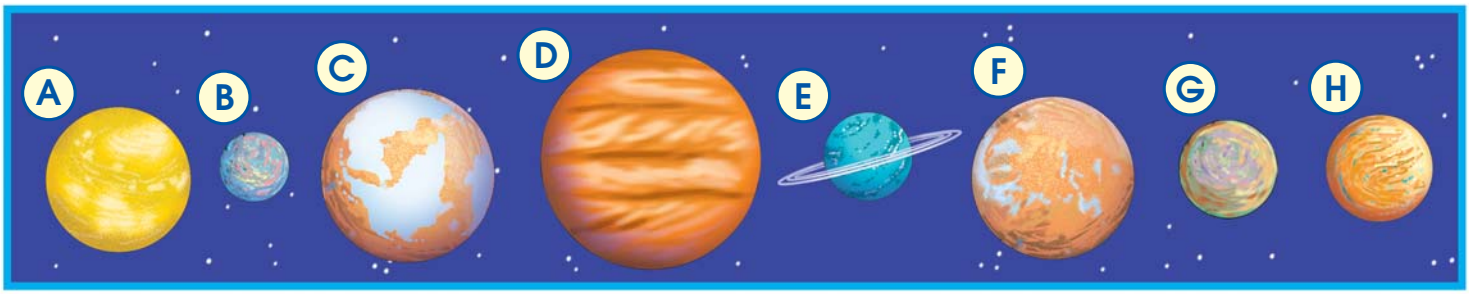
Challenge

1. Circle the planet that looks most like Earth.
2. Pick one planet. Write two sentences in your science journal about what that planet might be like.

Earth



Bringing It Home

Adult Supervision Recommended

Make a **model** (mod-el) of the Kepler telescope. Make it exactly like the picture, or be creative!

You need: cardboard tube, scissors, markers, glue, plastic jar lids, cardboard, beads, paper clips, etc.

Step 1: Cut all the parts as shown.

Step 2: Color all the parts.

Step 3: Glue the parts together as shown.

Step 4: Glue on beads, bits of cardboard, jar lids, or paper clips as shown.